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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/167,286	10/07/1998	ADEYINKA ADEDEJI	CN-8764	1184

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EXAMINER

HOKE, VERONICA P

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 02/14/2002

23

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/167,286

Applicant(s)
ADEDEJI ET AL

Examiner
VERONICA HOKE

Art Unit
1714



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4-9, 11-15, and 17-31 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-9, 11-15, and 17-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

The amendment of October 15, 2001, has been entered per the instruction in the communication captioned "Request for RCE" received on November 29, 2001. The status of the copending application referred to in the specification on page 4, line 27 as s.n. 09/087175, needs to be brought up-to-date.

Claim Rejections - 35 U.S.C. § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, 4-9, 11-15 and 17-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims are indefinite in scope because the Markush selection of polymer present in addition to the required PPO or PPO plus HIPS plastics closes the claims to the presence of other polymers. Therefore the impact modifier terminology which is intended according to the disclosure on page 7 to encompass polymeric impact modifiers renders ambiguous the actual preclusion of other resins by the Markush recitation.

The recitations "blends containing polycarbonate resin" and "blends containing polyetherimide resin" lack clarity because the remainder of the blend in each instance is of infinite scope. It reads on water, organic solvents, air, etc. None of these substances appears to be intended to be conveyed by the terminology "blends". The response dated October 15, 2001 attempts to read into the claims the disclosure regarding blends of the stated resin with another resin. Pending claims are given their broadest reasonable interpretation. Hence the limitations applicants counsel reads into the claims' scopes does not actually limit the claims scopes.

Claims 26, 30 and 31 are objected to under 37 CFR 1.75(b) which states that "More than one claim may be presented provided they differ substantially from each other and are not unduly multiplied." Claim 26 is an exact duplicate of claim 17, claim 30 is an exact duplicate of claim 21 and claim 31 is an exact duplicate of claim 22.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 17-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nakano et al.

Nakano et al disclose **organo phosphate -flame retardant polystyrene** (paragraph bridging cols. 11-12) **films** (thickness equal to or greater than 1 mm) **which preferably also contain polyphenylene ether** (col.3, line 65 et seq.) The composition also may contain an elastomer such as a **SEBS** block copolymer for impact purposes (col.11, second paragraph). The composition is **capable of being formed into sheets** which may be **laminated** to other plastics by either extrusion or press molding (col.13 - col. 14, line 31) into stampable sheets which in turn are capable of forming parts of floor decks which are a type of pallet (solid flat load bearing structure) **which may contain holes** (col.14, last paragraph through col.5, line 21).

Applicants assert that their pallet meets the standards set forth by the protocol UL 2335 for flame retardant plastic pallets. This assertion does not obviate this reference's pertinency since ostensibly by utilizing the same type flame retardants in the same type resin blends prepared by the same method of manufacture as applicants', reference's structure must exhibit the same flammability rating. Accordingly because patentees are silent regarding any nexus between their pallets' flameproofing level and other ratings with those prescribed by said UL standard does not

mean that the same ratings are not exhibited by reference's pallets. Applicants have not met the burden of establishing the contrary.

Claims 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al as applied to claims 17-22 supra, further in view of Haaf et al (126) or (685) further in view of Fowler et al (078) , Fujii et al and Abolins.

While Nakano et al is directed to laminating by extrusion or press molding his organo phosphate flame retardant and impact modified and fiber -reinforced polystyrene/ polyphenylene ether blend to form a molded article useful for pallet or floor decking, rather than injection molding the composition, injection molding of flame retardant, impact modified fiber reinforced polyphenylene /styrene resin blends is old according to Haaf et al (685) at col.9, line 13 and Haaf et al (126). In as much as Fowler discloses (col.4, last two paragraphs) that thermoplastics inclusive of ABS type styrene resins are ordinarily formed by either Nakano's stamp molding or injection molding into open-hole containing pallets, it would be obvious to adopt this alternative technique in utilizing Nakano's composition as an entirely injection molded composition. This would entail utilizing a filler not of the length and quantity which inhibits injection molding as evidenced by Nakano's comparative example no. 6 in col. 19 since the Haaf patents relate that even fibrous fillers whose length is not as great as Nakano's do not inhibit injection molding.

The presence of minor quantities on the order of 1.5 phr of polyethylene is suggested in both Haaf patents ('126 at Table 1 and '685 at the table spanning cols. 9-10). Fujii et al relates (col.2, lines 45-67, col.4, lines 29-51 and col.6, lines 53-57 as well as col. 10 , line 44) that linear low density polyethylene is recognized as an impact modifier for polystyrene /polyphenylene ether resin blends containing the same phosphate flame retardants Haaf utilizes. Additionally Abolins

(106) relates that linear low density ethylene resin improves crack resistance and impact strength in such resin blends (col.1, lines 29-46 and col. 5-7, first table) , such blends also containing SEBS- type impact modifiers as well .

Claims 1,2,4-6 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al (069) in view of Fuhr et al (065).

Alexander related (col.7) that polystyrene and / or polycarbonate inter alia several other thermoplastics are preferred as the plastic -forming pallet instead of thermosetting resins such as polyesters , epoxies or phenolics since they are more amenable to being injection molded.

Alexander also suggested (col.1) that pallets should exhibit flameproofing capability in as much as wooden pallets were inadequate in this aspect. Although no specific flame retardant is suggested with either of the above resins, it is known that polycarbonates are not flammable per se but require such protection upon being compounded with flammable substances such as polystyrene resins e.g. ABS resins which are added to improve the melt processing of polycarbonates as evinced by Fuhr's compositions which contain the very same phosphorus -flame retardants and impact modifiers (paragraph bridging cols. 5 and 6) espoused here. In view of the recognition of the need to flameproof injection moldable PC/styrene resin blends by adding a phosphorus flame retardant and Alexander's suggestion to utilize either or both of these resins in making injection molded plastic pallets, it would be prima facie obvious to the routineer in this art to apply Fuhr's composition for Alexander's utility in order to achieve a flame retardant PC/styrene resin blend -comprised pallet.

Applicant 's assertion that their pallet's composition meets a UL test protocol for flameproofed plastic pallets does not render the article so comprised unobvious in as much as the composition's configuration as a "pallet" fails to define over Fuhr's injection molded articles . A pallet simply

means the article is has at least one flat surface which is capable of transporting something. As such they do not patentably define over the molded articles of Fuhr which include any and all “housing parts.. domestic appliances and office machinery... office plates for the building industry and parts for the motor vehicle industry” which clearly convey other substances (col.10, lines 36 et seq.) . In any event, given the recognition of both the load bearing properties of injection molded PC and or PS for pallet purposes and the desirability of utilizing non-flammable pallets as related by Alexander and the need to flameproof injection molded polycarbonate compositions containing polystyrene, independent of their end use as related by Fuhr, the routineer is considered cognizant of how to achieve these objectives by utilizing the phosphate compounds proven effective for this purpose by Fuhr.

Claims 1,7,8,14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander (069) and Fowler (694) or (031) taken with 1) Miller (666) and Duhnkrack et al or 2) Serafini et al (138).

Both Alexander at col.1 and col.7 , Fowler (694) at col. 3, lines 18-33 and Fowler (031) at col.6, lines 7-20 relate the option of utilizing a thermosetting type resin such as an epoxy or phenolic resin in lieu of a thermoplastic such as ABS. , polycarbonate or polymonoolefin resin in the manufacture of plastic pallets. Alexander relates (col.1) that pallets that are non-flammable are desirable. Polyetherimides which are thermoset type resins aren’t specifically mentioned by either of said references for pallet formation. According to Serafini such thermoset resins (termed “prepolymer”) when sufficiently compounded with fiber reinforcing agents such as glass provide sufficient superior load bearing characteristics that the manufactured articles provide utility for aviation purposes (col.1, lines 24-31) which is considered to be load bearing in its

ability to withstand wind shearing weights. Serafini also relates that the resin is thermally stable to temperatures upto 800° F (equal to 371° C). This temperature exceeds that of polycarbonate and thus is indicative of this particular polymer's recognized inherently non-flammable nature which does not even necessitate a flame retardant's presence since the organic fire retardants would be rendered useless due to their own decomposition before the temperature is reached that incurs the resin's pyrolysis. In other words, the thermoset polymers which include polyetherimide are considered to be within Alexander's purview for pallet purposes, ostensibly because of their high load bearing (weight bearing) and non-flammable properties, although injection molding is not the recommended method of article formation. Note that Serafini utilizes hydraulic press molding. In as much as applicants have not established that injection molding is most suitable not that flame retardants are indeed ordinarily needed in this resin's use as a molded article., it would be obvious to utilize the molding techniques related by Serafini in formulating polyimide articles exhibiting load bearing properties inclusive of pallet utility.

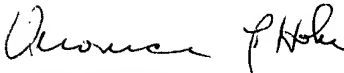
Where the thermoset resin comprising the pallet is a polyester, Miller's application of press molding indirectly confirms Alexander's admonishment that injection molding is not as practical in making the molded article. Flameproofing thermoset polyesters by utilizing phosphorus compounds such as organic phosphonates is old according to Duhnkrack et al such that one apprised of Alexander's and Fowler's disclosure would be cognizant of how to achieve a flame retardant pallet which is comprised of curable flame retardant polyester.

The claimed article's capability of meeting a UL test protocol for flameproofed pallets does not proscribe this rejection because applicants have not indicated what aspects of the standard would ordinarily preclude considering any flame retardant thermoset polyester as being capable of meeting such standard.

vph

February 11, 2002

703 308-2444


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